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GB 2145235 A GB 2064912 A DE 002607429 B
US 4860038 A

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(71) Applicant
Morag Cameron Mackinnon
71 Hillview Drive, Clarkston, Glasgow, G76 7JJ,
United Kingdom

(72) Inventor
Morag Cameron Mackinnon

(74) Agent and/or Address for Service
Fitzpatricks
4 West Regent Street, Glasgow, G2 1RS,
United Kingdom

(54) Video camera for swimming pool

(57) A video camera assembly comprises a video camera (26) mounted in a housing (16) which is located in a wall (11) of a swimming pool below the water level thereof. The housing preferably has a tubular body (17) with a transparent cover (20) which is sealed on the body. The cover (20) may be domed to allow the camera to scan. The housing may be one which normally contains a waterproof light fitting.

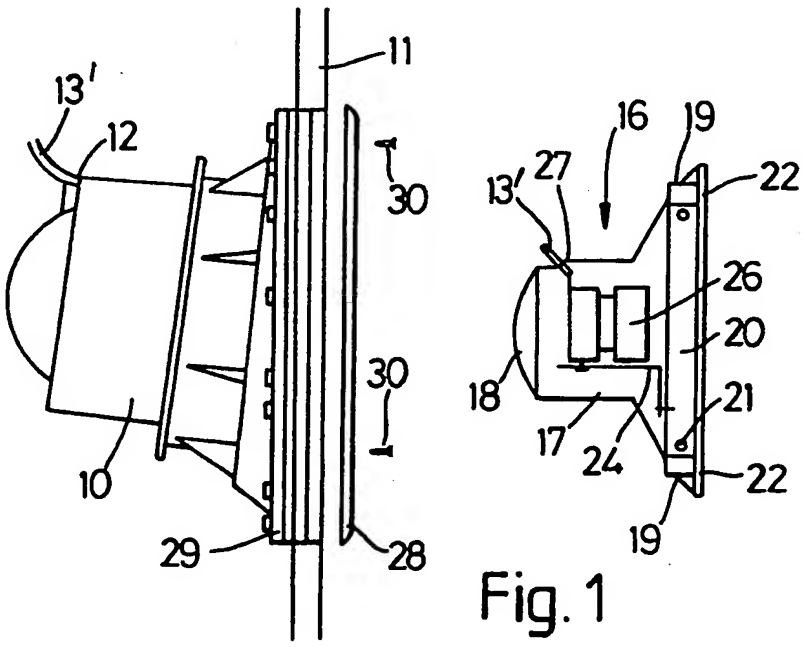

Fig. 1

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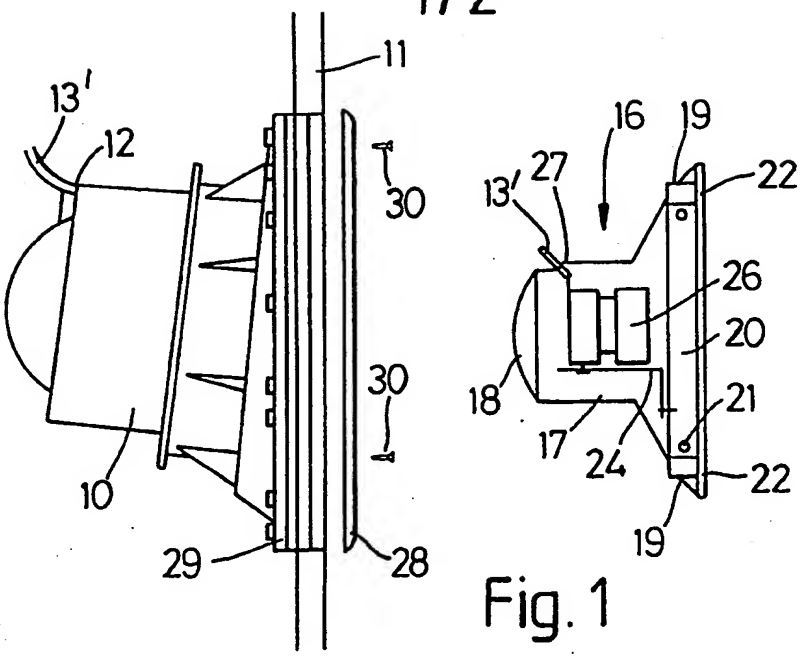
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Fig. 1

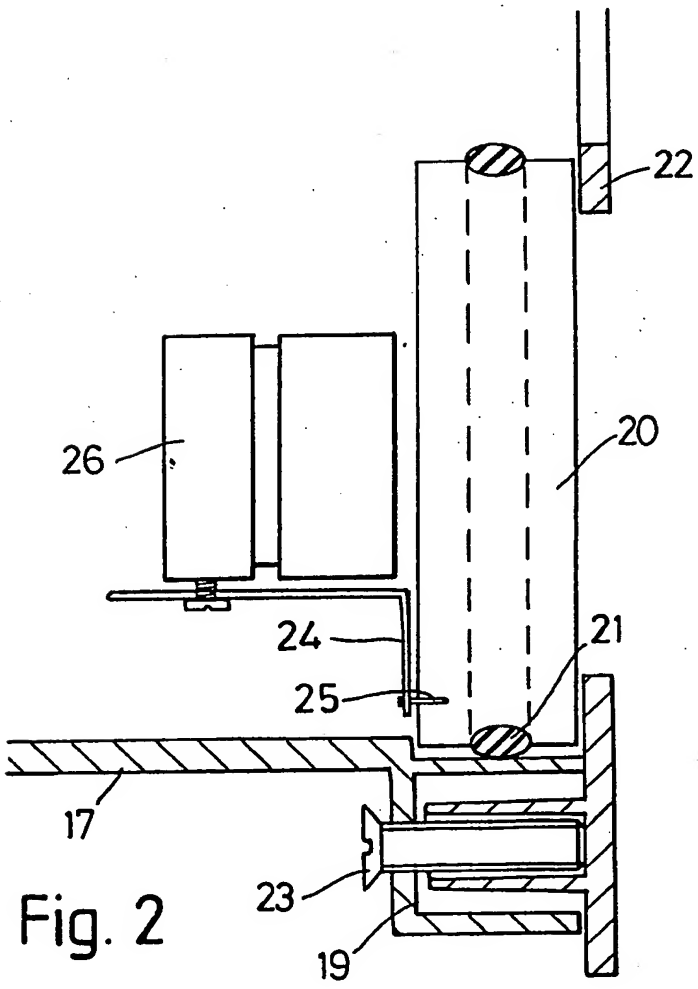
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Fig. 2

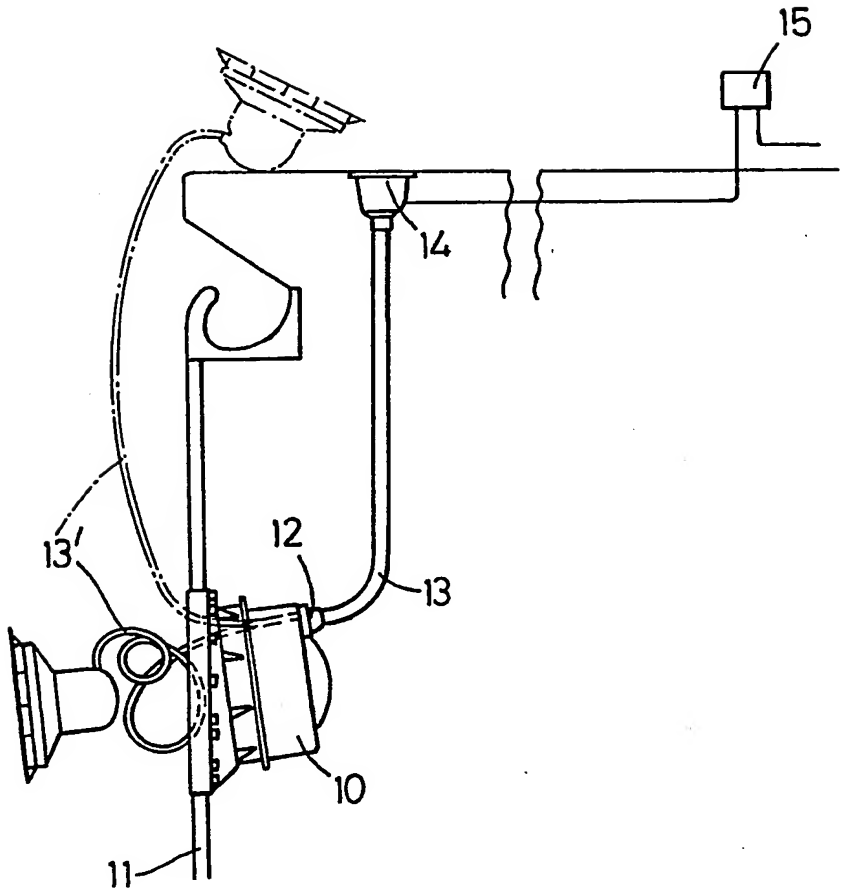

Fig. 3

UNDERWATER VIDEO CAMERA ASSEMBLY.

This invention relates to underwater video camera assemblies and in particular to assemblies for swimming pools.

Swimming pools have underwater lighting, fitted into recesses in the walls of the pool. In addition, some pools have public viewing ports or glass windows to allow the swimmers to be seen underwater, but in other pools that facility is not possible.

It is therefore an object of the invention to provide an underwater viewing facility particularly but not exclusively for swimming pools having no public viewing facility.

According to one aspect of the present invention there is provided a video camera assembly comprising a video camera mounted in a housing which locates in a wall of a swimming pool below the water level thereof.

Preferably, the housing comprises a housing body and a transparent port located over the housing body and means is provided to secure the transparent port in a watertight engagement with said housing body.

Preferably also, said transparent port carries a bracket mounting the video camera.

According to another aspect of the present invention there is provided a swimming pool in which at least one wall mounts a video camera assembly on a level which is below the normal water level.

Preferably, the video camera assembly is located in a lighting recess of the wall.

An embodiment of the present invention will now be described by way of example, with reference to the accompanying drawings, in which:-

Fig. 1 is an exploded side elevation, partly in section illustrating an underwater video camera assembly;

Fig. 2 is a side elevation to a larger scale of a part of the assembly; and

Fig. 3 illustrates the assembly in situ.

Referring to the drawings, the underwater camera assembly includes a standard outer housing or 'niche' 10 normally used to house a waterproof light fitting is mounted in an opening in a swimming pool wall 11 below the normal waterline of the pool.

Openings for lighting are arranged in each of the walls of the pool but only one opening in a part of one wall is illustrated.

The niche 10 has a sealed cable outlet 12 at the rear from which electric cable 13 passes via a deck box 14 to a transformer 15. Cable 13' also passes forwards through the open front of the niche and is connected to an inner housing 16 intended for location inside the niche 10.

The inner housing 16 has a tubular body portion 17 having a domed end 18 at one end and a flange 19 at the other open end.

A transparent cover 20 is located in the open end of the inner housing and 16 has a peripheral groove which carries an O-ring 21. An outer annular plate 22 is then screwed to the inner housing via eight screws 23 inserted from the rear of the flange 19 and the inner housing is securely watertight.

The transparent cover 20 which may be perspex, has an L shaped bracket 24 mounted on its inner face via screw 25 and the bracket carries a miniature video camera 26 which is connected electrically to the cable 13 via a sealed cable opening 27 in the rear of the inner housing. In this embodiment, the camera is static.

The assembly is installed by locating the inner housing 16 in the outer housing or niche 10 so that a front ring 28 can locate over the annular plate 22 and be bolted to a corresponding back ring 29 of the niche 10 from the pool side of the installation via two bolts 30.

In use the video camera gives an underwater view of the pool. The pictures can be displayed on screens for public viewing, or alternatively, the video camera can provide surveillance.

The transparent cover may be domed to allow for the camera to scan rather than be static.

CLAIMS

1. A video camera assembly comprising a video camera mounted in a housing which locates in wall of a swimming pool below the water level thereof.

2. A video camera assembly according to claim 1 wherein the housing comprises a housing body and a transparent port located over the housing body and means to secure the transparent port in a water tight engagement with said housing body.

3. A video camera assembly according to claim 2 wherein the transparent port carries a bracket mounting the video camera.

4. A swimming pool in which at least one wall mounts a video camera assembly on a level which is below the normal water level.

5. A swimming pool according to claim 4 wherein the video camera assembly is located in a lighting recess of the wall.

6. A video camera assembly substantially as hereinbefore described with reference to and as shown in the accompanying drawings.

Patents Act 1977

Examiner's report to the Comptroller under Section 17 (The Search Report)

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(ii) Int CL (Edition 5) G03B; H04N

Search Examiner
S E WILLCOX

Databases (see over)

(i) UK Patent Office

(ii) ONLINE DATABASES: WPI

Date of Search
5 JUNE 1992

Documents considered relevant following a search in respect of claims

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
X,Y	GB 2145235 A (DNELL) See particularly page 1, line 130 - page 2, line 9	1, 4
X,Y	GB 2064912 A (GRANTENBRINK)	1, 4
X	US 4860038 (THATCHER) Whole document	1, 2 at least
X	DE 2607429 B (ODENWALDER) Abstract	1, 4, 5

Category	Identity of document and relevant passages	Relevant to claim(s)

Categories of documents

X: Document indicating lack of novelty or of inventive step.

Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.

A: Document indicating technological background and/or state of the art.

P: Document published on or after the declared priority date but before the filing date of the present application.

E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

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